Montana Department of Fish, Wildlife & Parks

1420 E. 6th Ave, Helena, MT 59620

Draft Environmental Assessment

Elkhorn Mountains Westslope Cutthroat Trout Recovery Program: Dutchman Creek Westslope Cutthroat Trout Restoration Project

PART I. PROPOSED ACTION DESCRIPTION

1. Type of Proposed State Action:

The proposed project is designed to help secure a native and genetically pure westslope cutthroat trout (WCT) population in Dutchman Creek by reducing competition from nonnative trout. Nonnative trout would be removed from the project reach using mechanical removal methods including electrofishing and trapping. The project is part of the overall Elkhorns Westslope Cutthroat Trout Recovery Program (FWP 1999a) that is intended to ensure the long-term persistence of the seven remaining WCT populations in the Elkhorn Mountain Range.

2. Agency Authority for the Proposed Action

Montana Fish, Wildlife & Parks "...is hereby authorized to perform such acts as may be necessary to the establishment of and conduct of fish restoration and management projects..." under MCA § 87-1-702.

3. Name of Project

Elkhorn Mountains Westslope Cutthroat Trout Recovery Program: Dutchman Creek Westslope Cutthroat Trout Restoration Project

4. If Applicable:

Estimated Construction/Commencement Date:

• Non-native trout removal – Summer 2003

Estimated Completion Date:

 Non-native trout removal – 5 years pending monitoring results and internal review

Current Status of Project Design (% complete): 100%

5. Location Affected by Proposed Action (county, range and township)

Jefferson County, R3W, T7N

6. Project Size: Estimate the number of acres that would be directly affected that are currently:

- 1. Developed/ residential − 0 acres
- 2. Industrial 0 acres
- 3. Open space -0 acres
- 4. Wetland/ riparian − 0 acres
- 5. Floodplain -0 acres
- 6. Irrigated cropland 0 acres
- 7. Dry cropland -0 acres
- 8. Forestry -0 acres
- 9. Rangeland 0 acres
- 10. Other -0 acres
- **7. Map/site plan:** See Figure 1 and Figure 2.

8. Listing of any other Local, State or Federal agency that has overlapping or additional iurisdiction.

The U.S. Forest Service and Bureau of Land Management manage lands adjacent to Dutchman Creek. Along with the State, these federal agencies are cosigners of a Memorandum of Understanding (FWP 1999b) that outlines the agreement between agencies regarding recovery and management of WCT in the Elkhorn Mountains. The Memorandum of Understanding states, "The purpose of the Elkhorn Mountains Cutthroat Trout Restoration Program is to secure existing populations of Missouri River westslope cutthroat trout within the streams flowing within and from the Elkhorn Mountains, and to expand cutthroat trout distribution in suitable barren habitats".

(a) Permits:

Agency Name Permit Date Filed/#

None Applicable

(b) Funding:

Agency Name	Funding Amount
Montana Fish, Wildlife & Parks	The Dutchman Creek WCT Project

National Bring Back the Natives Program
Helena National Forest

The Butchman Creek WCT Project
is part of the larger WCT recovery program
in the Elkhorn Mountains that annually

Bureau of Land Management expends \$75,000 – \$90,000. Cost is detailed

Trout Unlimited on page 12.

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name Type of Responsibility

US Forest Service, Helena National Forest

Management of federal lands within the

Bureau of Land Management, Butte Field Office Elkhorn Mountain Range

9. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

BACKGROUND

Statewide WCT Status: Westslope cutthroat trout have declined in abundance and distribution throughout Montana, and in the Missouri River Basin pure populations are relatively rare (Shepard et al. 1997). Major factors contributing to this decline include competition with nonnative trout (brook, brown, and rainbow trout) that were first introduced to Montana in the 1890's, hybridization with rainbow and Yellowstone cutthroat trout, habitat changes, over-exploitation, and isolation to small headwater streams. Brook trout displacement of WCT is common where the species range overlap, and along with hybridization it is currently the greatest risk to many remaining pure WCT populations in the Missouri River drainage. The competitive advantage brook trout have over WCT can be attributed to a size advantage their young incur due to timing of reproduction. Most WCT populations in the Missouri River drainage are considered to have a low likelihood of long-term persistence (100 years) under current conditions.

Elkhorn Mountains WCT Status: Seven native and two introduced populations of WCT inhabit streams in the Elkhorn Mountains (Figure 1). In total, these populations occupy about 13 miles of stream, whereas nonnative trout (brook, rainbow, brown, and hybrid cutthroat trout) occupy about 112 miles of stream. In addition to competition with nonnative trout, threats to remaining Elkhorn WCT populations include small population sizes (about 60 to 500 WCT per population) and restricted distribution (0.1 to 3 miles) within each stream. Overall, current WCT distribution and abundance (2,000 – 3,000 total WCT) in the Elkhorn Mountains is much reduced than what would be expected without nonnative competition and habitat changes (e.g., historic placer mining). The likelihood of WCT continuing to persist in the mountain range is considered low unless restoration activities secure and increase the number and distribution of remaining populations. To date, WCT restoration efforts in the Elkhorn Mountains have included reducing nonnative competition in Muskrat, South Fork of Warm Springs, and Staubach creeks by capturing brook trout with electrofishing and placing them below barriers constructed to prevent their upstream migration. The range of WCT in the mountain range has also been increased through the introduction of wild WCT eggs or fish into previously fishless reaches of Eureka, Little Tizer, and Muskrat creeks.

Dutchman Creek Drainage WCT Status: Dutchman Creek maintains one of the seven native WCT populations in the Elkhorn Mountains (Figure 1 and Figure 2). The population is among the more abundant in the mountain range; however, numbers have recently declined as a result of drought. Genetic samples collected from 52 WCT in 2002 indicate no hybridization with nonnative species. The population almost exclusively resides in the upper 2 miles of stream (referred to as the "WCT reach"), below which nonnative brook trout are abundant and other trout species are rare. The WCT reach is partially isolated by a high-gradient cascade section (Figure 2) that prevents most upstream migration of fish; no other fish species were found above this point in surveys conducted between 1980 and 1999. This cascade section was believed to have "protected" the WCT population by isolating it from nonnative competition and hybridization; however, in 2002 a small number of brook trout were captured in the WCT reach. It is surmised that brook trout only recently moved into the reach, or alternatively, were

undetected in previous surveys and have been present for a long period of time.

Although brook trout numbers are currently low in the WCT reach (6 captured in 2500 feet of stream in October 2002), a management concern is that brook trout abundance will eventually increase to the detriment of WCT. The competitive advantage young brook trout have over young WCT, due to the timing of reproduction, has lead to near elimination of WCT in the lower reaches of Dutchman Creek. Similar competition and a reduction in WCT abundance would be likely in the upper reaches if brook trout expansion were not controlled.

Loss of the Dutchman Creek WCT population would significantly reduce the distribution and genetic diversity of pure WCT in the Elkhorn Mountains, and would delay efforts to restore WCT in the mountain range by eliminating an important source of fish and eggs used for restoration efforts. The proposed action is to remove a small number of nonnative brook trout from about 2 miles of Dutchman Creek with electrofishing and trapping. The removal effort would reduce the abundance and distribution of brook trout, and reduce the likelihood that they would detrimentally impact the WCT population. The project fulfills the State's obligation to protect all remaining pure WCT populations (FWP 1999c), and reduces threats that may encourage requests for listing under the Endangered Species Act.

PROPOSED ACTION

Overview

Electrofishing has been used in Montana and elsewhere to reduce the abundance of nonnative brook trout. Westslope cutthroat trout have typically responded to brook trout removal with increases in abundance and distribution (Brad Shepard, FWP, Bozeman, and Mike Enk, U.S. Forest Service, Great Falls, personal communications; FWP data files, Townsend). Most electrofishing removal projects are considered a "stop-gap" measure to reduce nonnative competition until highly effective and cost efficient fish toxicants can be used to completely remove the competing species. However, several recent studies have suggested that with significant amounts of electrofishing effort nonnative trout species can be eliminated from short stream reaches (Kulp and Moore 2000, FWP data files, Townsend). Unlike most previous electrofishing removal projects, this proposed project would be unique in that the target species, brook trout, currently has a very low abundance. This low abundance should allow a much greater opportunity to eliminate brook trout from the WCT reach with a relatively small amount of effort.

The specific action of the proposed project is to remove nonnative brook trout from the WCT reach with electrofishing or trapping. Electrofishing removals would include 1 or 2, 3-man crews using backpack electrofishing equipment to capture fish. The entire project reach would be electrofished over a 2 or 3 day period, and 1 to 3 periods per year depending on the number of brook trout captured. Electrofishing removals would occur during late summer or fall after WCT have spawned and fry have emerged. Brook trout captured during additional surveys (e.g., WCT egg collections) would also be removed. Brook trout may also be captured by placing small, funnel-shaped traps in the stream during September and October when they are spawning. A mature fish would be placed in each trap to help attract other mature fish.

All brook trout captured during the initial removal efforts (about 50 – 70% of the population) would be moved to below the barrier. In subsequent efforts captured brook trout would be euthanized. Continued relocation of brook trout would be more detrimental than beneficial to the population below the barrier as the capacity for the stream to sustain fish is limited by available space already occupied by the existing brook trout population. Based on current densities, it is likely that fewer than 50 brook trout will be captured during the first year of effort. Removals would continue until brook trout are eliminated from the project reach; failing this, effort would continue indefinitely to maintain low brook trout densities. Additional nonnative species (e.g., rainbow and brown trout) are not believed to exist in the project reach; however, these would be removed if found. Westslope cutthroat trout will either be returned immediately to the stream, held until the removal effort is complete, or moved upstream away from the electrofishing activities.

Most nonnative removal projects include placement of a migratory barrier to upstream moving fish that would prevent reinvasion of the nonnative species. Because brook trout are very rare and only recently found in the WCT reach, it is possible that their expansion into this stream section was a singular event – this would also indicate the high-gradient cascade section is a relatively secure, natural barrier. It is also possible that brook trout have always, in low numbers, been able to negotiate the cascade section, or that changes to the cascade section (e.g., rock slides) have reduced its effectiveness as a barrier. We will evaluate continued ingress of nonnative trout into the WCT reach by monitoring brook trout densities above the cascade section, and by individually marking fish below the cascades to determine if they can move upstream. If it is found that nonnative trout continue to move into the WCT reach, we will propose, through an additional Environmental Assessment process, adding an additional barrier.

10. List of agencies consulted during preparation of the EA:

- Montana Fish, Wildlife & Parks, Townsend, Bozeman and Helena
- U.S.D.A. Forest Service, Helena and Townsend

PART II. ENVIRONMENTAL REVIEW

1. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES		IMP	ACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated*	Comment Index
a. **Soil instability or changes in geologic substructure?		Х				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?		X				
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		x				
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		x				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

2. AIR		IMP	ACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated*	Comment Index
a. **Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		x				
b. Creation of objectionable odors?		Х				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		х				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		Х				
e. ***For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regs? (Also see 2a)		Х				
f. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (Attach additional pages of narrative if needed):

3. WATER		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated*	Comment Index
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?		Х				
b. Changes in drainage patterns or the rate and amount of surface runoff?		Х				
c. Alteration of the course or magnitude of floodwater or other flows?		Х				
d. Changes in the amount of surface water in any water body or creation of a new water body?		Х				
e. Exposure of people or property to water related hazards such as flooding?		Х				
f. Changes in the quality of groundwater?		Х				
g. Changes in the quantity of groundwater?		Х				
h. Increase in risk of contamination of surface or groundwater?		Х				
i. Effects on any existing water right or reservation?		Х				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		Х				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		Х				
I. **** <u>For P-R/D-J</u> , will the project affect a designated floodplain? (Also see 3c)		Х				
m. ***For P-R/D-J, will the project result in any discharge that will affect federal or state water quality regulations? (Also see 3a)		Х				
n. Other:						

4. VEGETATION		IMP	ACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact	Comment
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		Х			Mitigated *	Index
b. Alteration of a plant community?		Х				
c. Adverse effects on any unique, rare, threatened, or endangered species?		Х				
d. Reduction in acreage or productivity of any agricultural land?		Х				
e. Establishment or spread of noxious weeds?		Х				
f. **** <u>For P-R/D-J</u> , will the project affect wetlands, or prime and unique farmland?		Х				
g. Other:						

** 5. <u>FISH/WILDLIFE</u>		IMF	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Deterioration of critical fish or wildlife habitat?		Х				
b. Changes in the diversity or abundance of game animals or bird species?			Х		No	5b
c. Changes in the diversity or abundance of nongame species?		Х				
d. Introduction of new species into an area?		Х				
e. Creation of a barrier to the migration or movement of animals?		Х				
f. Adverse effects on any unique, rare, threatened, or endangered species?		Х				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		X				
h. ****For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		Х				
i. ***For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location? (Also see 5d)		X				
j. Other:						

Comment 5b. The proposed action is expected to result in a decrease in nonnative brook trout abundance in the uppermost 2 miles of Dutchman Creek. This is considered a minor impact because relatively few brook trout will be removed from the stream (likely fewer than 50 in the first year), and they will continue to be abundant in the lower reach of Dutchman Creek and other streams in the Elkhorn Mountains. The project is intended to secure the abundance and range of WCT, a rare and unique resource with limited distribution in the Missouri River drainage. Westslope cutthroat trout are currently protected by catch-and-release regulations in streams in the Elkhorn Mountains, but restoration efforts like the proposed action are intended to increase overall WCT abundance to allow future harvest of the species in this and other streams.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Increases in existing noise levels?		Х				
b. Exposure of people to serve or nuisance noise levels?		х				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		х				
d. Interference with radio or television reception and operation?		х				
e. Other:						

7. LAND USE		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		х				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		х				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		Х				
d. Adverse effects on or relocation of residences?		Х				
e. Other:						

8. RISK/HEALTH HAZARDS		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		Х				
b. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		X				
c. Creation of any human health hazard or potential hazard?		X				
d. *** <u>For P-R/D-J</u> , will any chemical toxicants be used? (Also see 8a)		Х				
e. Other:						

9. COMMUNITY IMPACT		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		Х				
b. Alteration of the social structure of a community?		Х				
c. Alteration of the level or distribution of employment or community or personal income?		Х				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:						

10. PUBLIC SERVICES/TAXES/UTILITIES		IMI	PACT *			
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				
b. Will the proposed action have an effect upon the local or state tax base and revenues?		Х				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		Х				
d. Will the proposed action result in increased used of any energy source?		Х				
e. **Define projected revenue sources			Х			10e
f. **Define projected maintenance costs.			Х			10e
g. Other:						

Comment 10e. The proposed project is part of the ongoing Elkhorn Mountains Westslope Cutthroat Trout Restoration Program (FWP 1999a). The Elkhorns Program annually expends \$75,000 to \$90,000 and is jointly funded by Montana Fish, Wildlife & Parks, the U.S. Forest Service (Helena National Forest and Bring Back the Natives Program), the Bureau of Land Management, and Montana Trout Unlimited.

Estimated specific costs associated with the project include:

Each year:

- Electrofishing removals: \$1,500 to \$4,500 for labor (90 270 hours)
- Travel: \$115 \$230 (from Townsend, vehicle expense and meals)

** 11. AESTHETICS/RECREATION		IMF	PACT *	-		
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		Х				
b. Alteration of the aesthetic character of a community or neighborhood?		Х				
c. **Alteration of the quality or quantity of recreational/tourism opportunities and settings? (Attach Tourism Report)		×				
d. ***For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		Х				
e. Other:						

12. CULTURAL/HISTORICAL RESOURCES	IMPACT *					
Will the proposed action result in:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		Х				
b. Physical change that would affect unique cultural values?		Х				
c. Effects on existing religious or sacred uses of a site or area?		X				
d. **** <u>For P-R/D-J</u> , will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)		X				
e. Other:						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

SIGNIFICANCE CRITERIA

13. SUMMARY EVALUATION OF SIGNIFICANCE	IMPACT *					
Will the proposed action, considered as a whole:	Unknown *	None	Minor *	Potentially Significant	Can Impact Be Mitigated *	Comment Index
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		х				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		Х				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		Х				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		х				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		х				
f. ***For P-R/D-J, is the project expected to have organized opposition or generate substantial public controversy? (Also see 13e)		Х				
g. **** <u>For P-R/D-J</u> , list any federal or state permits required.						

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources (Attach additional pages of narrative if needed):

PART II. ENVIRONMENTAL REVIEW, CONTINUED

 Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

Two alternatives were considered during the preparation of this EA

1) No Action

The predicted consequences of the "No Action" alternative are:

- Risk of competition from nonnative brook trout would not be decreased in a 2 mile reach of Dutchman Creek, and the possibility of a pure WCT population ultimately disappearing due to this risk would remain high.
- No costs associated with nonnative trout removal.
- 2) <u>Preferred Alternative: Removal of nonnative brook trout from upper Dutchman Creek</u> (proposed action)

The predicted consequences of the Preferred Alternative were detailed and discussed in Part I and Part II.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None

PART III. NARRATIVE EVALUATION AND COMMENT

Addressed in Part I and Part II

PART IV. EA CONCLUSION SECTION

1. Based on the significance criteria evaluated in this EA, is an EIS required (YES/NO)? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.

No. An EIS is not required under the Montana Environmental Policy Act (MEPA) because the project lacks significant impacts to the physical or human environment. Therefore, the impacts are appropriately addressed through an Environmental Assessment. The primary impact associated with the project is reduced abundance and distribution of nonnative trout in the headwaters of Dutchman Creek, which is the intended consequence of the action.

2. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

Public involvement for this project included Legal notification of this EA in the Boulder Monitor, Helena Independent Record, Townsend Star, Montana City Courier and Whitehall Ledger. The EA was mailed to local landowners and individuals and organizations that previously indicated interest in WCT projects in the Elkhorn Mountains. The EA was also available on the FWP web page (http://www.fwp.state.mt.us). Public comments can be given at the FWP web page, in writing at the address below, or at public open houses where questions regarding these projects can be addressed; these will be held at the Montana City School Library on May 13, 2003, between 6 and 8 pm, and at the USDA Service Center in Townsend on May 15, 2003, 6 – 8 pm. Please address any comments or questions to: Lee Nelson, Montana Fish, Wildlife & Parks, 415 South Front Street, Townsend, MT 59644, (406) 266-3425. Comments on the EA's will be accepted until 5:00 pm, June 2, 2003. This level of public involvement is believed adequate for the proposed project.

3. Duration of comment period, if any.

The public comment period for this proposal is from May 2, 2003, to June 2, 2003. Written comment can be mailed to:

Lee Nelson Montana Fish, Wildlife & Parks 415 South Front Street Townsend, MT 59644 E-mail: leenelson@fs.fed.us

4. Name, title, address and phone number of the person(s) responsible for preparing the EA:

Lee Nelson Fisheries Biologist Montana Fish, Wildlife & Parks 415 South Front Street Townsend, MT 59644 Phone: 406-266-3425

E-mail: leenelson@fs.fed.us

Figure 1. Approximate location of native westslope cutthroat trout populations in the Elkhorn Mountains at the initiation of the recover program (heavy black lines), and populations that have been introduced during restoration efforts (dotted lines).

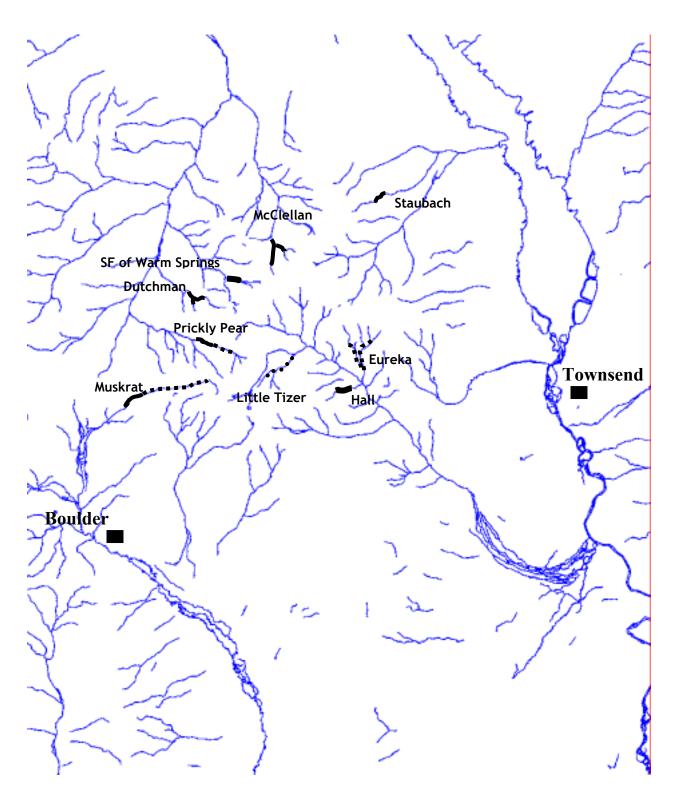
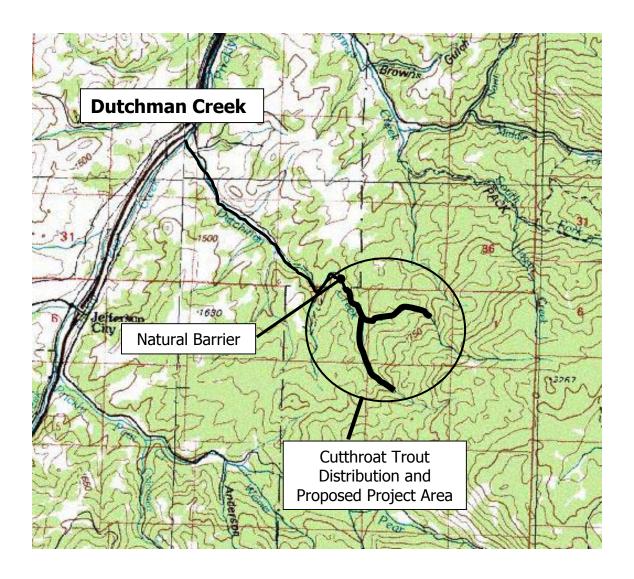


Figure 2. Approximate distribution of cutthroat trout in the Dutchman Creek drainage and proposed project area.



References

- FWP. 1999a. Environmental Assessment: Elkhorn Mountains Westslope Cutthroat Trout Restoration Program, Mountain Range Programmatic Assessment. Prepared by Ron Spoon and Jodie Canfield, Montana Fish, Wildlife and Parks, Region 3, Bozeman, Montana.
- FWP. 1999b. Memorandum of Understanding and Conservation Agreement for the Westslope Cutthroat Trout Restoration Program in the Elkhorn Mountains. Montana Fish, Wildlife and Parks, Helena, Montana.
- FWP. 1999c. Memorandum of Understanding and Conservation Agreement for Westslope Cutthroat Trout in Montana. Montana Fish, Wildlife and Parks, Helena, Montana.
- Kulp, M. A., and S. E. Moore. 2000. Multiple electrofishing removals for eliminating rainbow trout in a small southern Appalachian stream. North American Journal of Fisheries Management 20:259-266.
- Shepard, B. B., B. Sanborn, L. Ulmer and D.C. Lee. 1997. Status and risk of extinction for westslope cutthroat trout in the upper Missouri River Basin. North American Journal of Fisheries Management 17:1158-1172.